

GROWTH AND DEVELOPMENT OF START-UPS IN INDIA - A STUDY WITH RESPECT TO MECHANICAL AND PRODUCTION ENGINEERING

MEHUL MEHTA¹, RAJESHMAMILLA², SUNITHAVENUGOPAL³ & GOPICHAND. G⁴

¹B. Tech-VII semester, SENSE, Vellore Institute of Technology, Vellore, Tamil Nadu, India

²Associate Professor, VITBS, Vellore Institute of Technology, Vellore, Tamil Nadu, India

³Assistant Professor-Senior, SSL, Vellore Institute of Technology, Vellore, Tamil Nadu, India

⁴Assistant Professor, SCOPE, Vellore Institute of Technology, Vellore, Tamil Nadu, India

ABSTRACT

During the last two decades, there is a significant and considerable change in the manufacturing world because of globalization. In order to lessen the expenditure involved in paying the laborers most of the companies have been shifted to different locations. Due to this, highly developed nations have to lose their manufacturing industry and also the employment opportunities and jobs. In the present scenario, industrial people's perception and attitudes are more different. The stint MES (Meglio Esserne Senza) has become habitual and usual to find out the established solutions in industrial IT, simulated and effected in ways that up keeps production management and execution. In the present scenario, we have many start-ups and entrepreneurs than ever before and this is a triumph and successful outcome. The government of India has launched "Start-up India" movement. It has been taking various measures to improve the comfort of doing business and is also building a supportive and conducive environment for these start-ups. In the present study, a discussion is made on the Indian government's initiative and encouragement provided for start-ups especially mechanical and production engineering. A comparison regarding the progress of start-ups between two Asian countries India and China is also drawn.

KEYWORDS: Development, Entrepreneurs, Government Initiations, Growth & Start-ups

Received: Feb 01, 2018; **Accepted:** Feb 24, 2018; **Published:** Mar 14, 2018; **Paper Id.:** IJMPERDAPR201888

INTRODUCTION

Engineering holds a lion share in ensuring the progression and advancement of a nation's economy. It has also refined and improved the people's standard of life in a country. Its remit is extensive than just involving only in the construction of bridges and buildings, developing alternative and renewable technologies and tackling health issues globally. Thus a nation's economic growth and its engineering potential are interlinked. Innovation is the key -word of every start-up at present. The existing strategies of the corporate world are too conventional and the young minds of today have to come out with novel ideas to think beyond these strategies. Budding entrepreneurs do their best to assess the practicality of their business ideas. These entrepreneurs in the field of production engineering have to withstand a number of challenges arising from their venture. This is because a considerable capital investment is made in embracing the fast- paced, ever-changing technology, contesting other equally brilliant minds and manoeuvring through the exclusive challenges arising from their endeavor. Nevertheless, small and budding entrepreneurs are presented with restricted alternative sources of finance that result in constrained cash flows. The government of India has been undertaking several measures to improve the business management

of these fresh entrepreneurs. It is building an interactive and facilitating platform for these start-ups, with the launch of the “Start-up India” movement.

The “Start-up India Hub” will be the main stakeholder in this dynamic environment and will:

- Pursue their novel ideas in a hub and spoke model and team up with central and state governments, Indian and foreign VCs, banks, angel networks, legal partners, consultants, incubators, universities and R&D institutions.
- Provide assistance to start-ups throughout their life with specific focus on important aspects like provides data on different sources of finance, practical viability, improving marketing abilities, Know-how commercialisation and business consultancy counselling as well as organize mentorship programs by collaborating with government organizations, incubation centres, educational institutions and private organizations who aim to promote innovation.

The Start-up India Hub will be like a guide, mentor, and friend to all the Indian youth who have the willpower and capable enough to take risk and face challenges. It will hold their hands and walk with them throughout their journey.

RESEARCH METHODOLOGY

To do this study, investigational development work is undertaken systematically to increase the standard of knowledge.

LITERATURE REVIEW

Start-up India has been assured with an initial capital of 10K crore for a period of four years from the government. This seed capital is capable of inviting tenfold investment by 2022. Credit guarantee for start-up lending is another booster. Start-up plan was outspread on January 16 2016, to all the domestic and international entrepreneurs. Internet-based businesses from health to education, food to fashion and travel to payment platforms, all these have taken center stage recently. Industry expectation from the government is reciprocal. Few industry leaders who are backing start-up India require high bandwidth, tax breaks on budget smartphones supporting vernacular languages, simpler KYC norms and improved accessibility to electricity and credits. They are working together with policymakers to dispense with regulations which act as a brake to investments. Crisp documentation is a daydream for the young, technology savvy, smart entrepreneur. The developed countries have worked hard to make start-up operations simple. It is this framework which makes policymaking challenging and attention-grabbing for the government of the day. The Prime Minister revealed a 19-point agenda to take forward the start-up culture. The action plan included tax sops, ease-of-doing business, and innovation to help entrepreneurs to start-up and grow their business. (Forbes India, Start-up India, January 18, 2016).

Objectives of the Study

The main objective of this study is to find out the growth and development of start-ups in India with respect to Mechanical and production engineering and compare the progress of start-ups of India with China.

Data Collection

Secondary data is collected from journals, magazines, newspapers, Assocham and NASCOMM report.

Table 1: Indian Start-up Industry Composition

Technology Based Start-ups		Non-Technology Based Start-ups	
Name of the Sector	(%)	Name of the Sector	(%)
E-commerce	33%	Engineering	17%
B2B	24%	Construction	13%
Consumer interne	12%	Agri Products	11%
Mobile apps	10%	Textile	8%
SaaS	8%	Printing & Packaging	8%
Other	13%	Transport & Logistics	6%
-----	----	Outsourcing & Support	5%
		Others	32%
Total	4300	Total	5700

Source: NASSCOM Start up India report 2015.

Current State of Indian Start-Ups

India is one among the top five countries in the world in terms of start-ups. The united States ranks number one on the list with 83,000+ start-ups. The average age of start-up initiators in India is 28. Regarding gender classification, women from the 9% of total start-up founders and approximately 50% of growth is seen in the share of female entrepreneurs in the last twelve months. The average no. of new tech start-ups have moved from 480 in 2010 to 800 in 2015 and expected to increase to 2,000 in 2020. Total Tech start-ups are anticipated to increase from 4,300 in 2015 to 11,500 in 2020. Majority of the start-ups and/or investors are from Metro cities like Bangalore, Chennai, Gurgaon, Kanpur, Mumbai and the numeral of incubators has grown by 40% to 110% during 2014-15 in this metros. During 1993-2013, through start-ups 60% (approx.) of new jobs were created by SMEs.



Graph 1: India's Gross Value Added with Respect to Manufacturing Goods during 2012-2017

As estimates of Central Statistics Bureau, GVA of Indian manufacturing sector grew at a CAGR of 7.32% during the Financial year 2012 and 2017. Especially in the year 2017, the manufacturing sector grew at 7.7%. During April 2016 and January 2017, the wholesale price index with respect to manufactured goods grew 2.4%

Table 2:Start-ups in India vs China

Particulars	India	China
Total no. of start-ups(approx..)	10,000	10,000
Tech-based start-ups	4,300	3,400
Non-tech based start-up	5,700	6,600
Set up a new business (Days)	30-60	30
Corporate tax rate	34%	25%
No. of Tax payments by businesses (p.a.)	33	9
Bank lending rate	10.3%	5.6%
R&D spending % of GDP (Est. 2014)	0.85%	1.90%

Source: Assocham INDIA

The finest method to associate and match start-up ecosystems in these nations is by funding. In the year 2015 stockholders have invested \$9 billion in Indian start-ups. Similarly, China \$36 billion and the US more than \$500 billion invested in funding start-ups. In spite of many depositors both in India and China, the countries have a dearth of earlystage stockholders and start-up friendly services. But the US has a plenty of stockholders and start-up friendly services. Indian and China are highly populated and have a major share of world's populace. Until last decade, this populace was not reachable. But now they are handy and reachable. Several US-based tech majors have expanded to China and India. Local start-ups are given a run for their money due to them.

Government Initiatives

Indian Government is resourceful. It has taken manifold steps and has provided a conducive and congenial environment to develop manufacturing sector in our nation. A few significant initiatives and progress are:

In latest budget 2018-19, decreased the Income tax rate to twenty- five percent for those companies, whose turn over of up to Rs.250crores.

Under foreign trade policy, increased export incentives available to MSMEs by 2%.

Electronics and Information Technology Ministry is in the course of designing new electronics manufacturing strategy. The objective of this new strategy is to build an ecosystem of manufacturing in our nation. Thereby facilitate our nation to grow into a substantial global player in some of these categories.

Ministry of Home Affairs relaxed Arms rules to encourage 'Make in India' manufacturing scheme of the government. The relaxation of the policy is anticipated to boost investment in the production of armaments and thereby increase employment opportunities.

Indian Government has promoted a Phased Manufacturing Program (PMP) targeted to increase additional smartphone elements which come under Make in India initiative and thus give a raise to the local production of mobiles.

Indian government is making negotiations with the investors to further promote Foreign Direct Investment (FDI) in defence sector under the automatic route to 51% from the existing 49%, with the intention of encouraging Make in India initiative and to create more opportunities for employment.

The indian Government's Defence Ministry has authorized the "Strategic Partnership" model. This will allow private companies to associate with overseas players for building up submarines, helicopters, fighter jets and durable automobiles.

Table 3: Overview – Start-up India - The Next Big Theme for Economic Growth

	2015		2025	
Total no. of Start Ups	10,000		1,00,000	
Employment Generation ('000)	N/A		3500	
Expected contribution (US\$ bn)	N/A		500	
Global start-up ranking	3rd (Behind the US and the UK)		Aims to be No. 1	
Driving factors	<ul style="list-style-type: none"> • An emerging economy • Young population • Easing FDI norms 	<ul style="list-style-type: none"> • Growing middle class • Rise in discretionary spending • Focus on standard of living 	<ul style="list-style-type: none"> • Growing middle class • Rise in discretionary spending • Focus on standard of living 	<ul style="list-style-type: none"> • Increasing internet users • Urbanisation • Increasing domestic consumption
Challenges for startups	<ul style="list-style-type: none"> • Lack of awareness • Multiple clearance requirement • Multi-tax existence (Octroi, VAT, Excise, ST etc.) 	<ul style="list-style-type: none"> • Unorganised market Infrastructure in Tier II & III cities • Lack of early stage funding • Lack of mentoring 	<ul style="list-style-type: none"> • Unorganised market • Infrastructure in Tier II & III cities • Lack of early stage funding • Lack of mentoring 	<ul style="list-style-type: none"> • Stringent Exit policies • Ease of doing business • Corruption/red tape • Technological risk
Government Initiatives (including upcoming)	<ul style="list-style-type: none"> • Startup Ecosystem • Digital India • Online clearance portal 	<ul style="list-style-type: none"> • Tax exemption • MUDRA Bank • India Aspiration Fund 	<ul style="list-style-type: none"> • Easing fund raising • Other funding initiatives • Setting of SETU 	<ul style="list-style-type: none"> • Focused sectors • Awareness initiatives • Setting up incubators

Source: ASSOCHAM INDIA

CONCLUSIONS

From the study, it is plainly observed that Indians are maturing and evolution is traced with respect to starting up initiations especially in the area of production. This is because of change in focus, realignment of funds, strategy, and development of clear road-maps to establish an efficacious and sustainable start-up ecosystem. Upcoming days will be concerned with practical investments, cost-effectiveness and profits in trades, upsurge on Indian models and growth of tier 2/tier 3 start-ups getting on to solve the hitches and snags that are India-specific. Coming to a comparison between India and China, both the countries can shoot up revenues of companies instantly and companies are smart enough to understand that. That's why many US-based companies are trying to spread their business in China but with very little or no success. The same companies are outperforming Indian companies in India. There are two major reasons for these: Firstly, Indian policies are very friendly, open and approachable when compared to China. Secondly, India's internet language is English, while China's population have a preference for Chinese. This shows that we as a nation accept foreign companies to a large extent. Last decade belonged to China, with the Chinese companies seeing huge growth but India seems to be the favorite for the coming decade. Engineers help countries by developing infrastructure that provides basic services such as energy; water and food security; transport and infrastructure; communication; and access to education and healthcare. Linked to these goals, engineering should also have a positive impact on factors such as life expectancy that over time can be expected to aid economic development through improvements to productivity, which in turn results in increased GDP. However, the extent to which engineers can aid development is also dependent upon governments committing finance and resources to infrastructure projects, as well as developing a favorable business environment with good regulation and without corruption.

REFERENCES

1. Aswath Damodaran, *Valuing Young, Start-up and Growth Companies: Estimation Issues and Valuation Challenges*, SSRN Electronic Journal 06/2009; DOI: 10.2139/ssrn.141868.
2. Au, K., & Kwan, H. K. (2009). *Start-up capital and Chinese entrepreneurs: The role of family*. *Entrepreneurship Theory and Practice*, 33(4), 889-908.
3. Graham, Paul (2012). *Start up Equals Growth*, in *Graham's Essays on entrepreneurship*.
4. *The Hindu Business Line*, <http://www.thehindubusinessline.com/info-tech/india-lacks-enough-angel-investors-to-fund-startups-nasscom/article7817740.ece>, Printable version, Nov 20, 2015 9:50:48 PM.
5. http://www.grantthornton.in/globalassets/1.-member-firms/india/assets/pdfs/grant_thornton-startups_report.pdf.
6. Shailja Bhadra, Viveksharma.(2016). *Startup India- New Opportunities for the Entrepreneur*, 3rd International conference on Recent Innovations in science Engineering and Management, pp.1473-1476.
7. <https://yourstory.com/2016/07/india-china-usa-startups/>